

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-14 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Giannini et al. (5,968,293). Giannini discloses a method of straightening a profiled section (30) having a web (32) and flanges (34,36) by introducing a straightening force directly into the flange (34,36) by means of a straightening tool (62,64). Giannini discloses (col. 5, lines 6-63) that the profiled section is at a temperature of over 100 degrees C. Giannini discloses that the tool (64) has lateral roller surfaces (70a,70b,72,74) which contact narrow sides of the flanges (34,36). Fig. 4B shows that the roller surfaces (70a,70b,72,74) have angled chamfer regions that extend with respect to the flanges (34,36). Regarding claim 21, the straightening tool (62) is arranged above the profiled section.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 11-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Langford (1,914,439) in view of Serizawa et al. (4,022,046). Langford discloses a method of straightening a profiled section (R) having a web and flanges (rail head and foot) by introducing a straightening force onto the profiled section directly following hot rolling (page 3, col. 1, lines 43-48). Langford discloses that I-beams, angles and rails are known to be straightened. Langford discloses (col. 5, lines 6-63) that the profiled section is at a temperature of over 100 degrees C (page 1, col. 2, lines 83-87 and page 2, col. 1, lines 35-38). Langford (fig. 2) shows that straightening rolling tools (14a,18a) have lateral surfaces that are angled in relation to the head and foot of the profiled section (R) but does not disclose applying forces to the head and foot. Serizawa teaches applying straightening forces directly into a web and flange of a profiled section (1) by means of a roller straightening tool (11,11', fig. 7) and (15,15', fig. 9) wherein at least lateral ends of the roller straightening tools directly contact and apply forces to an angled portion of the section (1). It would have been obvious to one skilled in the art at the time of invention to contact and apply forces to the flange portions of Langford as taught by Serizawa in order to apply a pressing force to the entire profiled section.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Giannini et al. (5,968,293) in view of Maag (EP 0753360). Giannini does not disclose that the straightening tool lateral surface is inclined at angle of the order of magnitude of an angle of friction between the straightening tool and the flange surface. Maag teaches (col. 2, line 55) and (fig. 2,4 and 8) that it is known to incline a lateral surface of a roller straightening tool (6,3) at angle of friction between the straightening tool and the flange

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surface. It would have been obvious to one skilled in the art at the time of invention to angle the tool of Giannini as taught by Maag in order to minimize flange compression.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Langford (1,914,439) in view of Serizawa et al. (4,022,046) and further in view of Maag (EP 0753360). Langford in view of Serizawa does not disclose that the straightening tool lateral surface is inclined at angle of the order of magnitude of an angle of friction between the straightening tool and the flange surface. Maag teaches (col. 2, line 55) and (fig. 2,4 and 8) that it is known to incline a lateral surface of a roller straightening tool (6,3) at angle of friction between the straightening tool and the flange surface. It would have been obvious to one skilled in the art at the time of invention to angle the tool of Langford in view of Serizawa as taught by Maag in order to minimize flange compression.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDWARD TOLAN whose telephone number is (571)272-4525. The examiner can normally be reached on M-F.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edward Tolan/
Primary Examiner, Art Unit 3725